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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,863	05/14/2001	Reinhold Geiselhart	DE920000017US1	1179
36491	7590	02/26/2004	EXAMINER	
KUNZLER & ASSOCIATES 8 EAST BROADWAY SALT LAKE CITY, UT 84111			LU, KUEN S	
		ART UNIT	PAPER NUMBER	
		2177	9	
DATE MAILED: 02/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/855,863	GEISELHART, REINHOLD	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kuen S Lu	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 12/19/03.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-7,12-23 and 28-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-7,12-23 and 28-32 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## ***DETAILED ACTION***

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth

in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-2, 13-14, 17-18 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braden-Harder et al. (U.S. Patent 5,933,822) and in view of Nikolovska et al. (U.S. Patent 6,473,751, hereafter "Nikolovska").

As per Claims 1, 13 and 17, Braden-Harder teaches "gathering context information from the documents" at col. 22, line 67- col. 23, line 5 by performing query and retrieving search result;

"ranking the documents, based at least in part on the user preferences" at col. 9, lines 25-30 by matching logical triples between query and the retrieved documents to score and rank each document, and present the result to the user, where each relation type occurring in the triple can be assigned a pre-defined weight; and

"gathering user preferences for the context information" at col. 9, lines 30-37 by presenting records and documents of the highest ranking to the user.

Braden-Harder does not teach "presenting the context information to a user".

However, Nikolovska teaches “presenting the context information to a user” at Fig. 3, element S10-S50 by presenting various results of search to user for review.

As per Claims 2, 14 and 18, Nikolovska further teaches “revising the user preferences, in response to user input and re-ranking the documents based on the revised user preferences” at Fig. 3, elements S10-S50 by user to repeat a cycle of editing explicit profile, building an implicit profile, selecting search criteria, saving search criteria, viewing search result.

As per Claims 29 and 31, Braden-Harder teaches “user preferences comprise a plurality of rating levels” at col. 9, lines 30-34 by pre-defining a number for grouping document according to their rankings and thus forming a plurality of ranking levels.

As per Claims 30 and 32, Braden-Harder teaches “the documents are ranked without communicating with a search engine that located the documents” at Fig. 2, elements 201, 203, 300 and 420, and col. 9, lines 35-43 by user to rank documents at the client system without a necessity of networked connection.

2. Claims 3, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braden-Harder et al. (U.S. Patent 5,933,822) and in view of Nikolovska et al. (U.S. Patent 6,473,751, hereafter “Nikolovska”) as applied to claims 1-2, 13-14 and 17-18 above, and further in view of Schuetze (U.S. Patent 5,675,819).

As per claims 3, 15 and 19, the combined reference of Braden-Harder and Nikolovska teaches ranking a set of documents as described in Item 1.

Both Braden-Harder and Nikolovska do not teach extracting lexical affinities from the documents.

However, Schuetze teaches determining and extracting lexical co-occurrence of terms at col. 6, lines 5-8 and 20-25.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Schuetze's reference with Braden-Harder and Nikolovska's because both teachings are devoted to improve the accuracy of retrieving documents. The combination of the references would have improved overall precision of information system for precisely retrieving relative documents from a corpus of documents.

3. Claims 4, 5, 1/2/4/6, 1/2/5/6, 1/2/6, 1/6, 1/2/4/6/7, 1/2/5/6/7, 1/2/6/7, 1/6/7, 16, 20, 21, 17/18/22, 17/20/22, 17/21/22, 17/22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braden-Harder et al. (U.S. Patent 5,933,822) and in view of Nikolovska et al. (U.S. Patent 6,473,751, hereafter "Nikolovska") as applied to claims 1-2, 13-14 and 17-18 above, and further in view of Marchisio (U.S. Pub. 2002/0156763).

As per Claims 4 and 20, the combined Braden-Harder and Nikolovska reference teaches re-ranking documents into optimal, relevant and irrelevant, in terms of their relevance to query terms as described in Item 1.

Both Braden-Harder and Nikolovska do not teach "features extraction". However, Marchisio teaches at Fig. 3, elements 31-39, col. 6-7, [0065], lines 1-20. It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to include Marchisio's teaching on features extraction with Barden-Harder and Nikolovska's for providing additional functions such as

detecting acronyms and recognizing specific HTML, SGML or XML tags to the users of Braden-Harder and Nikolovska's system.

As per claims 5 and 21, the combined Braden-Harder and Nikolovska reference teaches re-ranking documents into optimal, relevant and irrelevant, in terms of their relevance to query terms as described in Item 1.

Both Braden-Harder and Nikolovska do not teach "extracting word frequency statistics from the documents".

However, Marchisio teaches "gathering context information comprises extracting lexical affinities from the documents" at col. 4, [0034], lines 18-20.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to include Marchisio's teaching on calculating word frequency with Braden-Harder and Nikolovska's document retrieval system. The teaching would have enabled Braden-Harder and Nikolovska's system to count the occurrences of individual search terms. Based on the statistics, the system would have allowed users to identify the higher hit search terms for improving the search syntax.

As per claims 6, 1/2/4/6, 1/2/5/6, 1/2/6, 1/6, 16, 17/18/22, 17/20/22, 17/21/22 and 17/22, the combined Braden-Harder and Nikolovska reference teaches re-ranking documents into optimal, relevant and irrelevant, in terms of their relevance to query terms as described in Item 1.

Both Braden-Harder and Nikolovska do not teach "weighting of the context information by a weighting function".

However, Marchisio does at col. 3, [0031], line 4 - [0032], line 14.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Marchisio's reference with Braden-Harder and Nikolovska's because both devoted to improve the performance of document retrieval. Measuring the similarity between query and document searching vectors through weighting function is a tool allow users of Barden-Harder's system to better sense the relative importance of the terms used in the document search and retrieval.

As for claims 1/2/4/6/7, 1/2/5/6/7, 1/2/6/7, 1/6/7 and 23, Braden-Harder teaches "utilizing discrete ranking levels in said weighting step." at col. 24, line 64 – col. 25, line 22.

4. Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braden-Harder et al. (U.S. Patent 5,933,822) and in view of Nikolovska et al. (U.S. Patent 6,473,751, hereafter "Nikolovska") as applied to claims 1-2, 13-14 and 17-18 above, and further in view of Fagin et al. (U.S. Patent 6,014,664).

The combined Braden-Harder and Nikolovska reference teaches re-ranking documents into optimal, relevant and irrelevant, in terms of their relevance to query terms as described in Item 1.

Both Braden-Harder and Nikolovska do not teach increasing the weight of higher rankings or decreasing the lower ones in order to increase the distance between the ranking scores.

However, Fagin specifically and clearly teaches scoring function, weighting rule, weighting adjustment and combined scoring functions, among others, through columns 9, 10 and 11.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Fagin's reference with Braden-Harder and Nikolovska's because both devoted to improve the accuracy and relevance of query terms such that more desired and only the highest ranked documents would have been retrieved. Combining the two teachings would have allowed users to enter more flexible queries and obtained highly re-ranked, but a smaller set of documents.

5. Claims 1/2/3/6, 17/19/22 and 1/2/3/6/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braden-Harder et al. (U.S. Patent 5,933,822) and in view of Nikolovska et al. (U.S. Patent 6,473,751, hereafter "Nikolovska") as applied to claims 1-2, 13-14 and 17-18 above, and further in view of Schuetze (U.S. Patent 5,675,819) and Marchisio (U.S. Pub. 2002/0156763).

As per Claims 1/2/3/6 and 17/19/22, the combined reference of Braden-Harder, Nikolovska and Shuetze teaches extracting lexical affinities from documents as described in Item 2.

The combined reference does not teach "weighting of the context information by a weighting function".

However, Marchisio does at col. 3, [0031], line 4 - [0032], line 14.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Marchisio's reference with Braden-Harder and Nikolovska's because both devoted to improve the performance of document retrieval. Measuring the similarity between query and document searching vectors

through weighting function is a tool allow users of Barden-Harder's system to better sense the relative importance of the terms used in the document search and retrieval.

As per Claim 1/2/3/6/7, Braden-Harder teaches "utilizing discrete ranking levels in said weighting step." at col. 24, line 64 – col. 25, line 22.

6. The prior art made of record

- A. U.S. Patent No. 5,933,822
- B. U.S. Patent No. 6,510,406
- C. U.S. Patent No. 5,675,819
- D. U.S. Patent No. 6,473,751
- E. U.S. Patent No. 6,014,664

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- F. U.S. Patent No. 6,519,586
- G. U.S. Pub. No. 2002/0055940 A1
- H. U.S. Patent No. 6,493,702
- I. U.S. Pub. No. 2002/0103798 A1
- J. U.S. Patent. No. 5,724,567
- K. U.S. Patent No. 5,696,962

***Response to the Arguments***

7. Applicant's arguments filed 12/09/2003 have been fully considered but they are not persuasive. It is discussed as the following:

- a) Regarding claims 1-2, 13-13 and 17-18, at Page 12 Applicant argued "Applicant has included elements such as "presenting the context information

to a user" and "gathering user preferences for the context information" which were originally in claim 8 and other similar claims. As indicated by the Examiner, these elements are not taught or suggested by Braden-Harder"".

As to the above argument a), the Examiner disagree because the Examiner cited col. 22, line 67 - col. 23, line 5 of Braden-Harder reference (hereafter "B-H") as the grounds for rejecting claims 1, 13 and 17, "... ranking a set of documents, ...gathering context information from ...", under 35 U.S.C. 102(e). Please refer the Examiner's First Office Action (hereafter "the Action"), Item 1. As to "gathering user preferences for the context information", the Examiner did agree B-H does not teach and reject this limitation of Claim 8 by B-H in view of Schuetze. Please refer to Item 2 of the Action.

b) At Page 12 the Applicant quoted U.S.C. 102 "an invention is anticipated if... all the claim limitations [are] shown in a single art prior art reference. Every element of the claimed invention must be literally present, arranged as in the claim. The identical invention must be shown in as complete detail as is contained in the patent claim." Richardson v. Suzuki Motor Co., Ltd., 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989)" and continued to argue "no suggestion or teaching in Braden-Harder of "presenting the context information to a user" and/or "gathering user preferences for the context information."

As to the above argument b), the Examiner repeat the same rationale as stated in responding to argument a). Furthermore, based on the amendments the Applicant made to the independent and dependent claims, the Examiner has created this Final Office Action (hereafter "the Final") for rejecting

rejecting the claims under U.S.C. 103(a). Please refer to Items 1 through 5 of the Final.

c) Regarding claims 3, 8-10, 15, 19 and 24-26, at Page 13 Applicant argued "... To establish a prima facie case of obviousness, the combination of the prior art references must teach or suggest all the claim limitations. See id. Applicant respectfully asserts that Braden-Harder and Schuetze fail to teach or suggest all the claim limitations of the amended independent claims 1, 13, and 17. Specifically, the references fail to teach or disclose "presenting the context information to a user gathering user preferences for the context information," or "ranking the documents, based at least in part on the user preferences" as recited in the amended independent claims. These elements or other similar elements were originally in claims 8, 9, 10, 24, 25, and 26. The references fail to teach or disclose involving a user in the ranking or re-ranking of documents in a result set".

As to the above argument c), the Examiner repeat the statement made to respond argument a) concerning 102(e) rejections of independent claims. Due to cancellations of claims 8-11 and 24-28, the Examiner reaffirm Schuetze' teaching on extracting lexical information at col. 6, lines 5-8 and 20-25 by quoting "determining lexical co-occurrence of terms within a document or query and forming a thesaurus" and "... results can be output to an output device ..." for rejecting "claims 3, 15 and 19 under U.S.C. 103(a) by referring to B-H and Nikolovska in view of Schuetze.

d) Regarding claims 1, 13 and 17, at Page 13 the Applicant continued to argue that B-H does not teach "presenting the context information to a user gathering user preferences for the context information", "ranking the documents, based at least in part

on the user preferences" or "ranking the documents, based at least in part on the user preferences".

As to the above argument d), the Examiner disagree because B-H teaches the following: "ranking the documents, based at least in part on the user preferences" at col. 9, lines 25-30 by matching logical triples between query and the retrieved documents to score and rank each document, and present the result to the user, where each relation type occurring in the triple can be assigned a pre-defined weight; and "gathering user preferences for the context information" at col. 9, lines 30-37 by presenting records and documents of the highest ranking to the user. As to "presenting the context information to a user gathering user preferences for the context information", Nikolovska teaches "presenting the context information to a user" at Fig. 3, element S10-S50 by presenting various results of search to user for review. The claims 1, 13 and 17 are rejected under 35 U.S.C. 103(a) by referring to B-H in view of Nikolovska as described in Item 1 of the Final.

e) Regarding claims 4-7,9,12,16,18, AND 20-28, at Pages 14 and 15 the Applicant argued "The Examiner rejected claims 4-7, 9, 16, 20-23, 25, and the various multiple dependent combinations under 35 U.S.C. 103(a) in view of Braden-Harder and Marchisio. The Examiner rejected claims 10-11 and 26-27 under 35 U.S.C. 103(a) in view of Braden-Harder and Kupiec.

The Examiner rejected claims 9/11, 24/27, and 25/27 under 35 U.S.C. 103(a) in view of Braden-Harder, Schuetze, Marchisio, and KUPiec. The Examiner rejected claims 12 and 28 under 35 U.S.C. 103(a) as being unpatentable in view of Braden-Harder and Fagin. Applicant respectfully traverses these rejections" and "Specifically, the limitations of "presenting the context information to a user," "gathering user preferences for the context information," or "ranking the documents, based at least in part on the user preferences" as in the amended

independent claims 1, 13, and 17 are missing from Braden-Harder as well as all the other references of record".

As to the above argument e), the Examiner repeat the rationale as discussed above in items a) through d) concerning the rejections of independent claims in the Final.

f) Regarding claims 4-7, 9-12, 16, 18, and 20-28, at Page 15 the Applicant repeated the same arguments about the grounds the Examiner established to reject the claims.

As to the above argument f), the Examiner has established the Final for 35 U.S.C. 103(a) rejections of claims 4-7, 16, 20-23 by referring to B-H in view of Nikolovska and Marchisio, claim 12 by referring to B-H in view of Nikolovska and Fagin, and claim 18 by referring to B-H in view of Nikolovska.

8. Considering the above discussion, the U.S.C. 103 rejection for claim 1-7, 12-23 and 28-32 is hereby sustained.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.**

The Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened

statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is (703) 305-9601 for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 703-305-4894. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 703-305-9790.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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KL

Patent Examiner

February 20, 2004



JOHN BREENE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100